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# Request for grant of a patent

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11 JUN 1998

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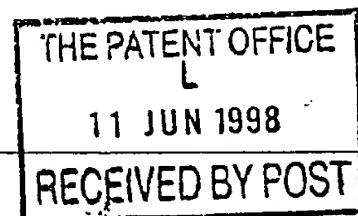
1. Your reference P1619-GB

2. Patent application number  
(The Patent Office will fill in this part) **9812462.1**

3. Full name, address and postcode of the or of each applicant (underline all surnames)  
FORMPAVE LIMITED  
TUFTHORN AVENUE  
COLEFORD  
GLOUCESTERSHIRE  
GL16 8PR

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation GB *S457261001*



4. Title of the invention  
PAVING BLOCK

5. Name of your agent (if you have one) K R BRYER & CO

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)  
7 GAY STREET  
BATH  
BA1 2PH

Patents ADP number (if you know it) *10777002*

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country	Priority application number (if you know it)	Date of filing (day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing (day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body.

See note (d))

Yes

**Patents Form 1/77**

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form	NIL
Description	6 + 6
Claim(s)	2 + 2
Abstract	NIL
Drawing(s)	2 + 2



10. If you are also filing any of the following, state how many against each item.

Priority documents	NIL
Translations of priority documents	NIL
Statement of inventorship and right to grant of a patent (Patents Form 7/77)	NIL
Request for preliminary examination and search (Patents Form 9/77)	NIL
Request for substantive examination (Patents Form 10/77)	NIL
Any other documents (please specify)	NIL

11. I/We request the grant of a patent on the basis of this application.

Signature K R Bryer & CO Date 10/06/98

12. Name and daytime telephone number of person to contact in the United Kingdom K R BRYER - 01225 42 88 77

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## PAVING BLOCK

This application relates to paving blocks for use in the construction of paved surfaces.

5

Paved surfaces have an increasingly wide range of applications. Many are constructed from individual, discrete paving blocks. The decorative or functional nature of such paving blocks may be deleteriously effected by spalling, i.e. fragmentation, particularly of their top edges. This is particularly a problem in paving systems which are constructed by close-fitting of individual paving blocks without any joint filling such as mortar or sand, as these systems allow relative movement of individual paving blocks.

There is, therefore, a need to reduce the tendency of paved surfaces to deteriorate by spalling.

20 According to the present invention there is provided a paving block for use in the construction of a paved surface, which paving block has a top surface, a bottom surface and at least one lateral surface extending between the top and bottom surfaces and abutting in use at least part of a lateral surface of at least one adjacent paving block, wherein a portion of the lateral surface of the block adjacent the top surface is tapered.

Tapering, i.e. inwardly inclining, a top portion of the lateral surface of the paving block allows a plurality of such blocks when laid or constructed into a paved surface to move more easily against one another and prevent  
5 spalling of the top surface.

Where the paving block is provided with more than one lateral surface it is preferred that each lateral surface is provided with a tapered portion. It is also preferred  
10 that the tapered portion extend along the entire edge between the or each lateral surface and the top surface. In such cases the paving block is in effect provided with a tapered surface extending between the or each lateral surface and its top surface.

15

The portion of the lateral surface which is tapered may extend over any desired part of the height of the lateral surface. It is, however, preferred that the portion of the lateral surface which is tapered be  
20 greater than 10% and less than 80% of the entire length or height of the lateral surface. More preferably the portion of the lateral surface which is tapered is in the range of 20 to 30 %, e.g. 25%, of the lateral surface.

25

The angle at which the lateral surface is tapered with respect to the remaining non-tapered portion of the lateral surface may be any suitable angle greater than 0°

and less than  $90^{\circ}$ , but is preferably in the range of greater than  $0^{\circ}$  to less than  $35^{\circ}$ , more preferably greater than  $0^{\circ}$  to less than  $15^{\circ}$  and most preferably between  $5^{\circ}$  and  $10^{\circ}$ .

5

The dimensions of the portion of the lateral surface which is tapered and the angle of inclination may be the same or different for each lateral surface of the paving block. It is preferred that at least corresponding  
10 lateral surfaces, i.e. those on opposing sides, or all lateral sides have a tapered portion of the same dimensions and angle of inclination so that the paving block has a degree of symmetry.

15 Suitable materials from which the paving block may be manufactured will be well known to the skilled man and will be chosen to suit the particular application for which the paving block is to be utilised. Suitable materials include, fired clay, concrete and the like. It  
20 is preferred that the paving block be made from a suitable sound material which has satisfactory mechanical properties such as compressive strength and flexural strength as well as abrasion resistance, high slip/skid resistance and good frost resistance.

25

Suitable dimensions and shapes for the paving block will also be well known to the skilled man and will be determined by the particular application for which the

paving block is to be utilised. In general, the paving block should have sufficient depth, i.e. the height or length of the lateral surfaces should be such, to ensure dispersion of concentrated loads applied to the paved surface in which the paving block is utilised and in particular be sufficient to prevent them from tipping over under load in situations where they are close-fitted without mortar or sand joint and therefore have relative lateral freedom with respect to adjacent paving blocks.

10

The top surface of the paving block may be shaped, configured, patterned or ornamented as desired according to practices well known in the art. The top surface of the paving block may, for example, be provided with a chamfered edge.

15

The paving block may be used in a wide range of applications including use in a paving system forming part of an industrial estate, a retail or shopping centre, a car park, a lorry park, a driveway, a pedestrian walkway, or for other hard landscaping such as playgrounds etc.

20

For a better understanding of the present invention and to show how the same may be put into effect reference will now be made, for the purpose of illustration only, to the accompanying drawings in which:

25

Figure 1 is a perspective view of a paving block



according to the present invention;

Figure 2 is a side view of the paving block of Figure 1;

Figure 3 is an end view of the paving block of Figure 1;

Figure 4 is plan view of the paving block of Figure 1; and

Figure 5 is an enlarged detail of part of the paving block of Figure 1.

10

The paving block illustrated in Figure 1 is a substantially cuboid paving block 1 having a length (dimension 2) of 200mm, a width (dimension 3) of 100mm and a height (dimension 4) of 80mm. The paving block 1 has a rectangular bottom surface 5 a substantially rectangular top surface 6 and two pairs of substantially rectangular opposing lateral surfaces 7.

Each lateral surface 7 is provided with a portion 8 which tapers inwardly towards the top surface 6. The height (dimension 9) of the tapered portion 8 of the lateral surface 7 is 20mm, i.e. it extends for approximately 25% of the overall height (dimension 4) of the lateral surface 7. The angle at which the tapered surface 8 extends with respect to the lateral surface 7 is approximately  $5^{\circ}$  to  $10^{\circ}$  so that it extends inwardly for about 1mm to 2mm, e.g. approximately 1.5mm.

The top surface 6 is provided with a chamfer 10 which extends inwardly from a narrow shoulder 11 extending around the periphery of the top surface 6 at its common edge with the tapered portions 8 of the lateral surfaces 7. The chamfer 10 is inclined at an angle of between 30° to 40°, e.g. approximately 35° with respect to the top surface 6. The shoulder 11 and chamfer 10 extend inwardly for about 5mm to 6mm, e.g. approximately 5.5mm.

10 The paving block is of particular use in paving systems where discrete paving blocks are laid close-fitting without mortar or sand joint. In such situations the tapering of the uppermost section of the lateral, i.e. abutting, surfaces of the paving block allows the paving  
15 blocks to move more easily against one another without giving rise to spalling on the top surface of the paving block.

## CLAIMS

1. A paving block for use in the construction of a paved surface, which paving block has a top surface, a bottom surface and at least one lateral surface extending between the top and bottom surfaces and abutting in use at least part of a lateral surface of at least one adjacent paving block, wherein a portion of the lateral surface of the paving block adjacent to the top surface is tapered.

2. A paving block according to Claim 1, wherein the paving block has more than one lateral surface and each lateral surface is provided with a tapered portion.

15

3. A paving block according to Claim 1 or 2, wherein the tapered portion of the paving block extends along the entirety of the edge between the top surface and the lateral surface.

20

4. A paving block according to Claim 1, 2 or 3, wherein the portion of the lateral surface which is tapered extends over 10% to 80% of the entire height of the lateral surface.

25

5. A paving block according to any preceding claim, wherein the angle at which the tapered portion extends with respect to the remaining portion of the lateral

surface is greater than  $0^{\circ}$  and less than  $15^{\circ}$ .

6. A paving block substantially as hereinbefore described with reference to and as illustrated in Figures 1 to 5 of the accompanying drawings.

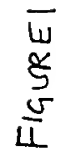


Figure 1



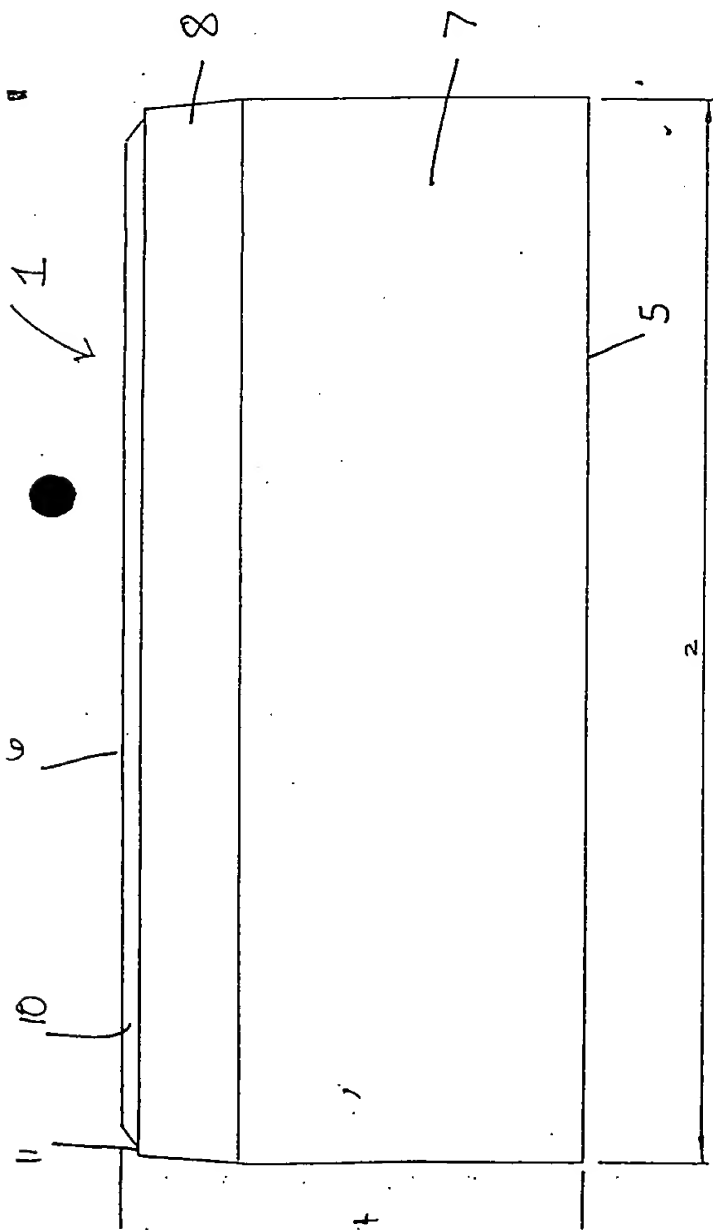


FIGURE 2

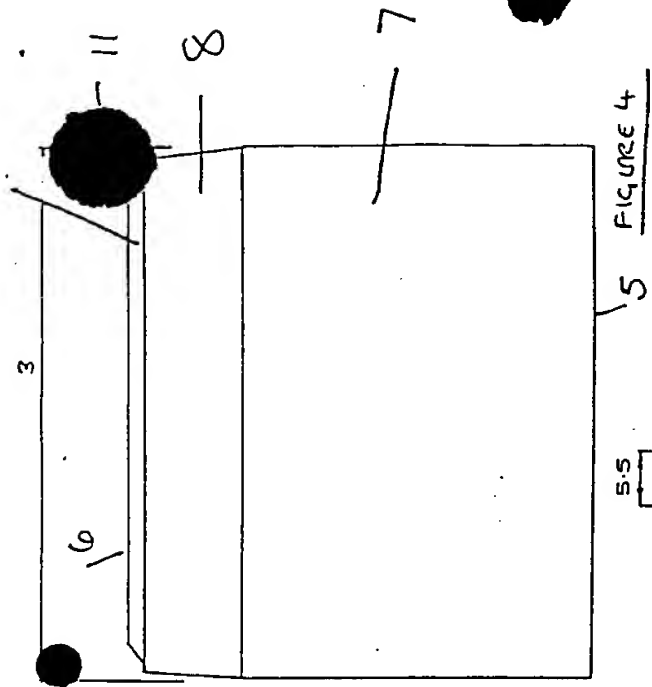


FIGURE 4

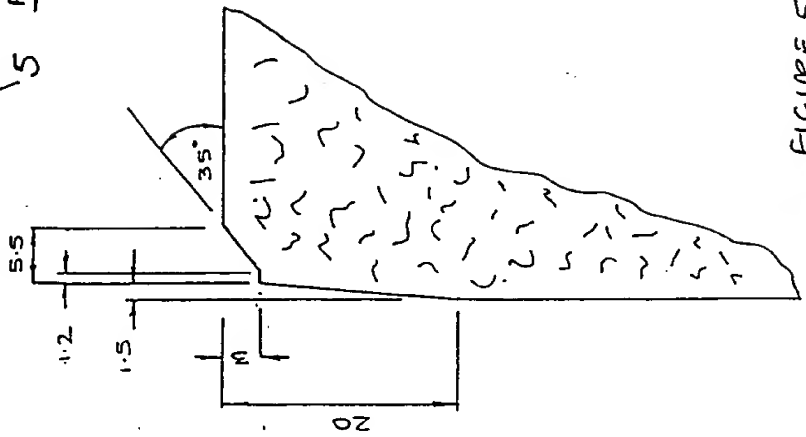


FIGURE 5

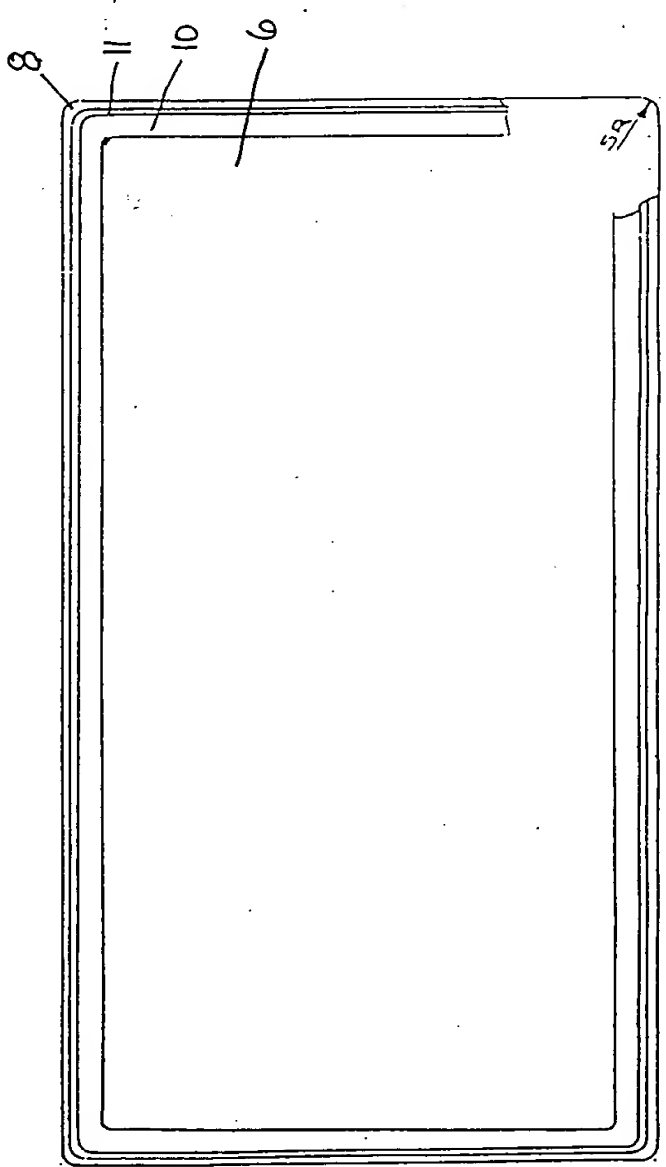


FIGURE 3

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Bath.

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